

PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL SEARCHING AUTHORITY

INVITATION TO PAY ADDITIONAL FEES

(PCT Article 17(3)(a) and Rule 40.1)

To:
SEED INTELLECTUAL PROPERTY LAW GROU
P PLLC
Attn. POTTER, Jane E.R
Suite 6300
701 Fifth Avenue
Seattle, WA 98104-7092
UNITED STATES OF AMERICA

Date of mailing
(day/month/year)

25/09/2001

PAYMENT DUE

within 45 ~~xxxx~~ days
from the above date of mailing

Applicant's or agent's file reference
210121.42720

International application No.
PCT/US 00/ 30904

International filing date
(day/month/year)

09/11/2000

Applicant

CORIXA CORPORATION et al.

1. This International Searching Authority

- (i) considers that there are 450 (number of) inventions claimed in the international application covered by the claims indicated ~~xxxx~~ on the extra sheet:

and it considers that the international application does not comply with the requirements of unity of invention (Rules 13.1, 13.2 and 13.3) for the reasons indicated ~~xxxx~~ on the extra sheet:

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- (ii) ☒ has carried out a partial international search (see Annex)

☐ will establish the international search report

on those parts of the international application which relate to the invention first mentioned in claims Nos.:
See additional sheet, Invention 1.

- (iii) will establish the international search report on the other parts of the international application only if, and to the extent to which, additional fees are paid

2. The applicant is hereby invited, within the time limit indicated above, to pay the amount indicated below:

EUR 945,00 x 449 = EUR 424.305,00
Fee per additional invention number of additional inventions total amount of additional fees

Or, _____ x _____ = _____

The applicant is informed that, according to Rule 40.2(c), the payment of any additional fee may be made under protest, i.e., a reasoned statement to the effect that the international application complies with the requirement of unity of invention or that the amount of the required additional fee is excessive.

3. ☒ Claim(s) Nos. See Remark

Article 17(2)(b) because of defects under Article 17(2)(a) and therefore have not been included with any invention.

Name and mailing address of the International Searching Authority



European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Andria Overbeeke-Siepkens

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

Invention 1: Claims 1-11 14-64 partially

A polypeptide comprising at least an immunogenic portion of a prostate tumor protein defined as SEQ ID 108 and which is encoded by the related SEQ IDs 2,3,107 (according to the Description of the Sequence Identifiers), fragments and variants thereof, fusion proteins comprising it, polynucleotides or oligonucleotides derived therefrom, antibodies or fragments thereof binding to the polypeptide, pharmaceutical compositions or vaccines comprising these products and their use in methods for inhibiting, monitoring or diagnosing the development of a prostate cancer, for removing tumor cells from a sample or for expanding and/or stimulating T-cells.

Inventions 2-450: Claims 1-64 (all partially and as far as applicable)

As for subject 1 but concerning respectively SEQ IDs 1,4-106,109-111,115-171,173-175,177,179-305,307-315,326,328,330,332-335,340-375,381,382,384-476,524,526,530,531,533,535 and 536.

The use of polypeptides derived from prostate cancer cells for the development of therapeutic and diagnostic means has been well documented in the prior art :

[1] - WO9733909, WO9837093 and WO 9837418 disclose polypeptides for treating and diagnosing prostate cancer. These polypeptides (or the corresponding nucleic acid sequences) are used for the preparation of vaccines and other pharmaceutical compositions, antibodies, probes or primers

[2] - In IMMUNOTECHNOLOGY 3 (1997),161-172, Sjögren, H. reviews the various techniques used for cancer-vaccination by using engineered cells. In figures 1 and 2, the author summarises the key factors involved in the interactions between T-cells and antigen-presenting cells, in particular dendritic cells. The success of these therapy is exemplified, among others, with prostate cancer in rats (see pages 167 and 168).

In view of the prior art, the problem underlying the application can be defined as the provision of further polypeptides derived from prostate cancer.

The solutions proposed in the underlying application can be summarised as the polypeptides (and the corresponding nucleic acids) as defined in claims 1 and 31.

Due to the fact that the use of polypeptides derived from prostate cancer cells for the development of therapeutic and diagnostic means is known in the prior art, that therapeutic immunization techniques against cancers, and especially prostate cancer are common state of the art, due to the essential difference in primary structure of the different groups of solutions, and due to the fact that no other technical features can be distinguished which, in the light of the prior art could be regarded as special technical features, the ISA is of the opinion that there is no single inventive concept underlying the plurality of claimed inventions of the present application in the sense of rule 13.1 PCT. Consequently there is lack of unity.

The applicant states and shows that some sequences as defined in claims 1 and 31 correspond to the same product (e.g. clone F1-12 corresponds to SEQ IDs 2,3, 107 and 108) and therefore to the same inventive concept. Nevertheless, due to the lack of an obvious and straight forward relationship between the product designations and the corresponding sequences in the Sequence Listing, the ISA had to consider (with exception of Subject 1.) each sequence as a different invention formulated as the 450 different subjects on the communication pursuant to Art. 17(3)(a) PCT.

In case the applicant choses to pay one or more additional search fees for any of subjects 2 to 450, and provides a clear relationship between a product designation and several of the sequences, the ISA is willing to regroup these sequences in one search effort.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 206

Continuation of Box 3.

Although claims 23 24 31-33 36 37 39-41 are (partially) directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

1. The present communication is an Annex to the invitation to pay additional fees (Form PCT/ISA/206). It shows the results of the international search established on the parts of the international application which relate to the invention first mentioned in claims Nos.:
- 1-11, 14-64**
2. This communication is not the international search report which will be established according to Article 18 and Rule 43.
3. If the applicant does not pay any additional search fees, the information appearing in this communication will be considered as the result of the international search and will be included as such in the international search report.
4. If the applicant pays additional fees, the international search report will contain both the information appearing in this communication and the results of the international search on other parts of the international application for which such fees will have been paid.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 37093 A (CORIXA CORP) 27 August 1998 (1998-08-27)	1-11, 14-24, 60,61, 63,64
Y	the whole document	25-41
X	WO 98 37418 A (CORIXA CORP) 27 August 1998 (1998-08-27) the whole document	1-11, 42-64
X	DATABASE EMBL 'Online! Accession no AF047020 Sequence ID AF047020, 20 February 1998 (1998-02-20) ALBERS C ET AL: "Human alpha-methylacyl-CoA racemase cDNA sequence" XP002176408 abstract	1-11,60, 61,63,64
Y	EP 0 317 141 A (BECTON DICKINSON CO) 24 May 1989 (1989-05-24) the whole document	34-36

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	SCHMIDT-WOLF G D ET AL: "Activated T cells and cytokine-induced CD3+CD56+ killer cells." ANNALS OF HEMATOLOGY, vol. 74, no. 2, 1997, pages 51-56, XP002176407 ISSN: 0939-5555 the whole document ----	34-36
A	X WO 97 33909 A (CORIXA CORP) 18 September 1997 (1997-09-18) ----	
Y	X JOGREN H O: "Therapeutic immunization against cancer antigens using genetically engineered cells" IMMUNOTECHNOLOGY, ELSEVIER SCIENCE PUBLISHERS BV, NL, vol. 3, no. 3, 1 October 1997 (1997-10-01), pages 161-172, XP004097000 ISSN: 1380-2933 the whole document ----	25-33, 37-41
P,X	X WO 00 04149 A (CORIXA CORP) 27 January 2000 (2000-01-27) the whole document ----	1-11, 14-64
E	X WO 01 25272 A (CORIXA CORP ; REED STEVEN G (US); XU JIANGCHUN (US); CHEEVER MARTIN) 12 April 2001 (2001-04-12) claims -----	1-11, 14-64

Patent Family Annex

Information on patent family members

International Application No

PCT/US 00/30904

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9837093 A	27-08-1998	US 6261562 B AU 731840 B AU 6181898 A CN 1252837 T EP 1005546 A HU 0002095 A NO 994069 A PL 335348 A TR 9902053 T US 6262245 B ZA 9801585 A	17-07-2001 05-04-2001 09-09-1998 10-05-2000 07-06-2000 28-10-2000 22-10-1999 25-04-2000 21-04-2000 17-07-2001 04-09-1998
WO 9837418 A	27-08-1998	AU 6536898 A BR 9807734 A EP 0972201 A ZA 9801536 A	09-09-1998 31-10-2000 19-01-2000 08-01-1999
EP 0317141 A	24-05-1989	US 5041289 A AT 108659 T DE 3850745 D DE 3850745 T ES 2059537 T JP 2002345 A	20-08-1991 15-08-1994 25-08-1994 24-11-1994 16-11-1994 08-01-1990
WO 9733909 A	18-09-1997	AU 728186 B AU 2329597 A BR 9708082 A CA 2249742 A EP 0914335 A NO 984229 A US 6034218 A	04-01-2001 01-10-1997 27-07-1999 18-09-1997 12-05-1999 13-11-1998 07-03-2000
WO 0004149 A	27-01-2000	AU 5314899 A EP 1097208 A NO 20010196 A	07-02-2000 09-05-2001 12-03-2001
WO 0125272 A	12-04-2001	AU 7994200 A	10-05-2001

PATENT COOPERATION TREATY

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From the INTERNATIONAL SEARCHING AUTHORITY

PCT SEED INTELLECTUAL PROPERTY LAW GROUP PLLC

To:
SEED INTELLECTUAL PROPERTY LAW
GROUP PLLC
Attn. Potter, Jane, E. R.
Suite 6300
701 Fifth Avenue
Seattle, WA 98104-7092
UNITED STATES OF AMERICA

INVITATION TO PAY ADDITIONAL FEES

(PCT Article 17(3)(a) and Rule 40.1)

Applicant's or agent's file reference 210121.42723	Date of mailing (day/month/year) 10/04/2002
International application No. PCT/US 01/09919	International filing date (day/month/year) 27/03/2001
Applicant CORIXA CORPORATION	

1. This International Searching Authority

- (i) considers that there are 651 (number of) inventions claimed in the international application covered by the claims indicated ~~below~~ on the extra sheet:

and it considers that the international application does not comply with the requirements of unity of invention (Rules 13.1, 13.2 and 13.3) for the reasons indicated ~~below~~ on the extra sheet:

- (ii) ☒ has carried out a partial international search (see Annex) ☐ will establish the international search report on those parts of the international application which relate to the invention first mentioned in claims Nos.:

1-17 (all partially)

- (iii) will establish the international search report on the other parts of the international application only if, and to the extent to which, additional fees are paid


2. The applicant is hereby **invited**, within the time limit indicated above, to pay the amount indicated below:

EUR 945,00 x 650 = EUR 614.250,00
 Fee per additional invention number of additional inventions total amount of additional fees

Or, _____ x _____ = _____

The applicant is informed that, according to Rule 40.2(c), the payment of any additional fee may be made under protest, i.e., a reasoned statement to the effect that the international application complies with the requirement of unity of invention or that the amount of the required additional fee is excessive.

3. ☒ Claim(s) Nos. further info have been found to be unsearchable under Article 17(2)(b) because of defects under Article 17(2)(a) and therefore have not been included with any invention.

Name and mailing address of the International Searching Authority
 European Patent Office, P.B. 5818 Patentlaan 2
 NL-2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Barbara Klaver

BK

1. The present communication is an Annex to the invitation to pay additional fees (Form PCT/ISA/206). It shows the results of the international search established on the parts of the international application which relate to the invention first mentioned in claims Nos.:

1-17

2. This communication is not the international search report which will be established according to Article 18 and Rule 43.

3. If the applicant does not pay any additional search fees, the information appearing in this communication will be considered as the result of the international search and will be included as such in the international search report.

4. If the applicant pays additional fees, the international search report will contain both the information appearing in this communication and the results of the international search on other parts of the international application for which such fees will have been paid.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 37039 A (TADA KEISHI ;SAKAI YUICHI (JP); ASAHI CHEMICAL IND (JP); KOBAYASHI) 27 August 1998 (1998-08-27)	1-9, 11-16
Y	the whole document SEQ ID NO 1	10,17
X	WO 98 37418 A (CORIXA CORP) 27 August 1998 (1998-08-27) the whole document SEQ ID NO 1	1-8, 11-16
X	WO 00 04149 A (CORIXA CORP) 27 January 2000 (2000-01-27)	1-17
Y	the whole document SEQ ID NO 1	10,17
E	WO 01 25272 A (CORIXA CORP ;REED STEVEN G (US); XU JIANGCHUN (US); CHEEVER MARTIN) 12 April 2001 (2001-04-12) claims 50-71	9-17
E	WO 01 34802 A (HARLOCKER SUSAN L ;CORIXA CORP (US); DAY CRAIG H (US); JIANG YUQIU) 17 May 2001 (2001-05-17) claims 31-55	9-17
E	WO 01 51633 A (FANGER GARY RICHARD ;HARLOCKER SUSAN L (US); MEAGHER MADELEINE JOY) 19 July 2001 (2001-07-19) claims	1-17

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Patent Family Annex

Information on patent family members

International Application No

PCT/US 01/09919

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9837039	A	27-08-1998	AU 727823 B2	21-12-2000
			AU 6229598 A	09-09-1998
			EP 0976699 A1	02-02-2000
			JP 10291880 A	04-11-1998
			WO 9837039 A1	27-08-1998
			JP 11071192 A	16-03-1999
WO 9837418	A	27-08-1998	AU 6536898 A	09-09-1998
			BR 9807734 A	31-10-2000
			EP 0972201 A2	19-01-2000
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			WO 9837418 A2	27-08-1998
			ZA 9801536 A	08-01-1999
WO 0004149	A	27-01-2000	AU 5314899 A	07-02-2000
			BR 9912007 A	29-01-2002
			CN 1315998 T	03-10-2001
			EP 1097208 A2	09-05-2001
			NO 20010196 A	12-03-2001
			WO 0004149 A2	27-01-2000
			US 6329505 B1	11-12-2001
			US 2002022248 A1	21-02-2002
WO 0125272	A	12-04-2001	AU 7994200 A	10-05-2001
			WO 0125272 A2	12-04-2001
WO 0134802	A	17-05-2001	US 6329505 B1	11-12-2001
			AU 1656501 A	06-06-2001
			AU 6158700 A	30-01-2001
			WO 0104143 A2	18-01-2001
			WO 0134802 A2	17-05-2001
			US 2002022248 A1	21-02-2002
WO 0151633	A	19-07-2001	AU 3447401 A	24-07-2001
			AU 6158700 A	30-01-2001
			WO 0104143 A2	18-01-2001
			WO 0151633 A2	19-07-2001
			US 2002022248 A1	21-02-2002